Title (en)

EARLY STRENGTH SLAG-BASED CEMENTITIOUS BINDER

Title (de)

ZEMENTÖSES BINDEMITTEL AUF SCHLACKENBASIS MIT FRÜHER FESTIGKEIT

Title (fr)

LIANT CIMENTAIRE À BASE DE LAITIER À RÉSISTANCE INITIALE

Publication

EP 4222128 A1 20230809 (EN)

Application

EP 21801718 A 20211001

Priority

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- US 2021053092 W 20211001

Abstract (en)

[origin: WO2022072779A1] The present invention provides exemplary method and additive for making cementitious binders that comprise primarily ground granulated blast furnace slag (GGBFS) having excellent strength at 24 hours, with preferably little or minimal amounts of Ordinary Portland Cement (OPC). As OPC manufacture involves carbon dioxide release into the atmosphere, the use of a GGBFS-based binder composition will help to enhance sustainability practices in the construction industry and minimizing strength losses implied by deletion of OPC. Strength in the GGBFS binder composition is enhanced by an alkaline-earth activator in combination with a strength enhancing component comprising dispersant and secondary activator.

IPC 8 full level

C04B 7/153 (2006.01); **C04B 7/17** (2006.01); **C04B 28/08** (2006.01); **C04B 40/00** (2006.01)

CPC (source: EP KR US)

C04B 7/1535 (2013.01 - EP KR); **C04B 7/17** (2013.01 - EP KR); **C04B 14/28** (2013.01 - KR US); **C04B 18/08** (2013.01 - KR); **C04B 22/062** (2013.01 - KR); **C04B 22/064** (2013.01 - KR US); **C04B 22/066** (2013.01 - KR US); **C04B 22/085** (2013.01 - KR US); **C04B 22/124** (2013.01 - KR US); **C04B 24/12** (2013.01 - KR); **C04B 24/122** (2013.01 - KR); **C04B 24/20** (2013.01 - KR US); **C04B 24/243** (2013.01 - KR); **C04B 24/2647** (2013.01 - KR US); **C04B 24/2688** (2013.01 - KR); **C04B 28/082** (2013.01 - EP KR US); **C04B 40/0028** (2013.01 - KR); **C04B 40/0039** (2013.01 - EP KR); **C04B 40/0082** (2013.01 - KR); C04B 2103/10 (2013.01 - US); C04B 2103/408 (2013.01 - US); C04B 2103/44 (2013.01 - KR); C04B 2111/1037 (2013.01 - EP KR); Y02P 40/10 (2015.11 - EP KR); Y02W 30/91 (2015.05 - EP KR)

C-Set (source: EP)

1. **C04B 40/0039** + **C04B 22/062** + **C04B 22/064** + **C04B 22/066** + **C04B 22/085** + **C04B 22/124** + **C04B 24/12** + **C04B 24/122** + **C04B 24/20** + **C04B 24/243** + **C04B 24/2647** + **C04B 24/2688**
2. **C04B 28/082** + **C04B 14/28** + **C04B 18/08** + **C04B 22/062** + **C04B 22/064** + **C04B 22/066** + **C04B 22/085** + **C04B 22/124** + **C04B 24/12** + **C04B 24/122** + **C04B 24/20** + **C04B 24/243** + **C04B 24/2647** + **C04B 24/2688** + **C04B 40/0028** + **C04B 40/0082** + **C04B 2103/44**

Designated contracting state (EPC)

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